



Publications of the Week

Expansion *In Situ* Genome Sequencing Links Nuclear Abnormalities to Aberrant Chromatin Regulation

First Authors: Ajay Labade (*pictured*), Zachary Chiang, and Caroline Comenho | Senior Author: Jason Buenostro Science | Harvard University, Broad Institute, McGovern Institute, Koch Institute, Howard Hughes Medical Institute, Wyss Institute, and MIT



Microscopy and genomics are used to characterize cell function, but approaches to connect the two types of information are lacking, particularly at subnuclear resolution. Here, researchers describe expansion *in situ* genome sequencing, a technology that enables sequencing of genomic DNA and superresolution localization of nuclear proteins in single cells. [Abstract](#) | [Press Release](#)

Multimodal Cell Maps as a Foundation for Structural and Functional Genomics

First Authors: Leah Schaffer and Mengzhou Hu | Senior Authors: Edward Huttlin (*pictured*), Emma Lundberg, and Trey Ideker Nature | Harvard Medical School and the Broad Institute



Human cells are organized across a spatial hierarchy of components, ranging from small protein complexes to large condensates, compartments, and organelles, many of which remain unexplored. Here, researchers construct a global map of human subcellular architecture through joint measurement of biophysical interactions and immunofluorescence images for over 5,100 proteins in U2OS osteosarcoma cells. [Abstract](#)

Loss of Insulin Signaling in Microglia Impairs Cellular Uptake of A β and Neuroinflammatory Response Exacerbating AD-Like Neuropathology

First Author: Wenqiang Chen | Senior Author: Ronald Kahn (*pictured*) Proceedings of the National Academy of Sciences | Joslin Diabetes Center and Harvard Medical School



Clinical studies have suggested a strong link between type 2 diabetes (T2D) and Alzheimer's disease (AD). Researchers sought to ask how dysregulated insulin signaling in glial cells of the brain contributes to AD onset and progression. To this end, they created mouse models to dissect the role of microglial insulin signaling in mediating the comorbidity of T2D and AD. [Abstract](#) | [Press Release](#)

[View All Publications](#) ➔

Awards

Brittany Walsh Receives 2025 FAS Dean's Distinction Award

Harvard University Department of Molecular and Cellular Biology (MCB)



Brittany Walsh (*pictured*), Research Assistant for the Bellono Lab, has been named a 2025 recipient of the Faculty of Arts & Sciences Dean's Distinction Award, one of Harvard's highest staff honors. The award recognizes Walsh's outstanding contributions to the MCB community — ranging from running a unique multi-species research facility to organizing board game nights and mentoring future scientists. [Read More](#)

Lifetime Achievement Award Recognizes Catalyst of ALS Therapy Research and Development

Massachusetts General Hospital



In April 2025, the American Academy of Neurology presented the Lifetime Achievement Award for Clinically-Relevant Research to Dr. Merit Cudkowicz (*pictured*), Director of the Sean M. Healey and AMG Center for amyotrophic lateral sclerosis (ALS). The award recognizes Dr. Cudkowicz's efforts in creating worldwide collaborations that have transformed the search for therapies targeting neurodegenerative diseases. [Read More](#)

Aging Brain Initiative Seed Grants Fund Five New Projects to Address Neurodegenerative Disease

The Picower Institute



The devastating impacts of neurodegenerative diseases such as Alzheimer's afflict millions of American families. To help meet a variety of the challenges these diseases pose, MIT's Aging Brain Initiative has awarded seed grants that will launch five innovative research projects across campus. One of the six new projects is led by Dr. Laura Kiessling (*pictured*). [Read More](#)

[View All Awards](#) ➔

Local News

Adding Immune Checkpoint Inhibitor to Standard Chemotherapy Regimen Improves Outcomes in Stage 3 Colon Cancer, Study Finds

Dana-Farber Cancer Institute



Combining standard adjuvant chemotherapy with an immune checkpoint inhibitor (atezolizumab) leads to a significant improvement in disease-free survival in a subset of patients with stage 3 colon cancer that is deficient in DNA mismatch repair, Dana-Farber Investigator Dr. Jeffrey Meyerhardt (*pictured*) and his colleagues reported at the 2025 American Society of Clinical Oncology meeting. [Read More](#)

New Drug Combination Increases Overall Survival in Patients With *PIK3CA*-Mutated Advanced Breast Cancer

Mass General Brigham



Mutations in the *PIK3CA* gene are a key driver of breast cancer. A recently completed phase 3 clinical trial, conducted by Dr. Dejan Juric (*pictured*) and his team at Mass General Brigham, shows that combining inavolisib with palbociclib and fulvestrant improves overall survival for patients with advanced *PIK3CA*-mutated breast cancer. [Read More](#)

Dr. Feyisayo (Sayo) Eweje on Helping Gene Therapies ENTER the Right Cells

Wyss Institute



Sayo Eweje (*pictured*) loves finding solutions, whether he's looking at a Rubik's Cube or a technical challenge in the lab. When faced with the problem of how to impact patients, he found the answer in an MD/PhD program, where he is training to be a medical doctor while further developing his scientific research mind. The next problem: treating genetic disorders like cystic fibrosis and sickle cell anemia. [Read More](#)

How the Brain Distinguishes Between Ambiguous Hypotheses

McGovern Institute



In a new study, researchers have uncovered neural activity patterns that encode simultaneous hypotheses, which is the first time this has been seen in the brain. Researchers led by Dr. Mark Harnett (*pictured*) found that these representations, which were observed in the brain's retrosplenial cortex, not only encode hypotheses but also could be used by the animals to choose the correct way to go. [Read More](#)

Tufts Chemists Design a Next Generation of Weight Loss Drugs

Tufts Now



Weight loss drugs like Ozempic and Wegovy are used by over 15 million adults in the U.S., or 4.5% of the population. Despite their effectiveness, they have drawbacks. Their effect may not last after discontinuing use, and side effects have raised concerns about long-term harms. Now Tufts researchers led by Dr. Krishna Kumar, have designed a new, next-generation compound with hopes that it could be more effective with fewer side effects. [Read More](#)

[View All Local News](#) ➔ | [Submit an Article](#) ➔

📅 Upcoming Events in Boston

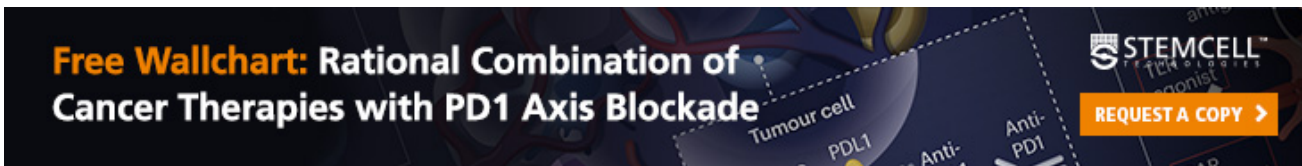
June 25 - 27 8:00 AM	2025 RNA Therapeutics: From Concept to Clinic UMass Medical School
June 27 9:00 AM	Koch Institute Symposium 2025 Huntington Hall
August 18 - 21 8:00 AM	The Bioprocessing Summit 2025 Omni Hotel Boston at the Seaport
September 18 9:00 AM	The 2025 Aging Brain Initiative Symposium: The Neuro-Immune Axis and the Aging Brain Singleton Auditorium
September 22 - 25 8:00 AM	Discovery On Target 2025 Sheraton Boston Hotel

[View All Events](#) ➔ | [Submit an Event](#) ➔

📁 Science Jobs in Boston

Senior Director, Biostatistics (Hybrid) Vertex
Research Scientist, Cancer Center, Stott Lab Mass General Brigham
Principal Scientist, Small Molecule Process Development Amgen
Senior Scientist II, Functional Genomics Novartis
Research Scientist II, Ghobrial Lab Dana-Farber Cancer Institute

[View 50 Other Science Jobs](#) ➔ | [Submit a Job](#) ➔



Submit your articles and events by reaching out to us at info@scienceinboston.com.

BROUGHT TO YOU BY



STEMCELL Technologies
Products | Services

STEMCELL Science News
Free Weekly Updates on Your Field

The Stem Cell Podcast
Interviews and Updates on Stem Cell Science